

Please amend the claims as follows:

1. (Original) A tissue type recognition system for determining a type of unknown tissue comprising :

a tip;

a shaft for coupling said tip to a handle;

a plurality of electrodes in said tip;

tissue recognizing circuitry electrically coupled to said plurality of electrodes;

wherein said circuitry injects electrical current into said tissue via said electrodes for measuring at least two unique electrical properties of said tissue; and,

each of said electrical properties is compared with corresponding electrical properties of known tissue types to determine said type of unknown tissue.

2. (Original) The tissue type recognition system of claim 1 wherein said electrodes are used in pairs to measure a pulse response of said tissue.

3. (Original) The tissue type recognition system of claim 1 wherein each of said plurality of electrodes are used to perform a terminal conductivity measurement.

4. (Original) The tissue type recognition system of claim 1 wherein contact between said electrodes and said tissue is checked by making measurements on adjacent pairs of said plurality of electrodes.

5. (Original) The tissue type recognition system of claim 1 wherein said current is

between 0 and 10 milliamps applied at a frequency of at least 100 kHz.

6. (Original) The tissue type recognition system of claim 1 further comprising the step of using discriminant analysis when data for different known tissue types is difficult to separate.

7. (Amended) ~~The tissue type recognition system of claim 1 further comprising a~~ A method for detecting the presence of abnormal tissue in a cervix comprising the steps of:

measuring an electrical conductivity of cervical tissue in said cervix via a first pair of ~~said~~ electrodes;

measuring a pulse and decay property of said cervical tissue in said cervix via a second pair of ~~said~~ electrodes; and,

combining said conductivity and said pulse and decay properties to differentiate between normal and abnormal cervical tissue.

8. (Original) The tissue type recognition system of claim 1 wherein the tip further comprises a large electrode.

9. (Original) The tissue type recognition system of claim 1 wherein said electrodes are arranged in a number of rows.

10. (Amended) ~~The tissue type recognition system of claim 9 further comprising a~~ A

method for scanning a canal wall electronically by employing ~~electrodes~~ in turn electrodes arranged in a number of rows so that appropriate pairs of electrodes are energized thereby simulating movement of one pair of electrodes in a circular scanning motion along said canal wall.

11. (Amended) ~~The~~ A tissue type recognition system of ~~claim 1~~ for determining a type of unknown tissue, comprising :

a tip;

a shaft for coupling said tip to a handle;

a plurality of electrodes in said tip;

tissue recognizing circuitry electrically coupled to said plurality of electrodes;

wherein said circuitry injects electrical current into said tissue via said electrodes for measuring at least two unique electrical properties of said tissue; and,

each of said electrical properties is compared with corresponding electrical properties of known tissue types to determine said type of unknown tissue

wherein the tissue recognizing circuitry further comprises means for measuring a pulse response of said tissue, an electrical resistance of said tissue, a reactance of said tissue, and a potential difference of said tissue.

12. (Original) The tissue type recognition system of claim 11 wherein the means for measuring a pulse response of said tissue further comprises a method including the steps of:

applying a pulse across a pair of said electrodes; and,

measuring a decay of said pulse across said pair of electrodes.

13. (Original) The tissue type recognition system of claim 11 wherein the means for measuring a reactance of said tissue further comprises a method including the steps of:

measuring a first phase angle of voltage across a resistor in said tissue

recognizing circuitry electrically coupled to said tissue via a pair of said electrodes;

measuring a second phase angle of voltage across said pair of electrodes;

comparing said first and said second phase angles to yield data on the reactive part of the tissue impedance.

14. (Original) The tissue type recognition system of claim 11 wherein the means for measuring a potential difference of said tissue further comprises a method including the steps of:

injecting current into said tissue via a pair of said electrodes;

discontinuing said current; and,

raising a gain of a programmable gain amplifier connected to said pair of electrodes.

15. (Amended) ~~The~~ A tissue type recognition system ~~of claim 1~~ for determining a type of unknown tissue, comprising :

a tip;

a shaft for coupling said tip to a handle;

a plurality of electrodes in said tip;

tissue recognizing circuitry electrically coupled to said plurality of electrodes;

wherein said circuitry injects electrical current into said tissue via said electrodes

for measuring at least two unique electrical properties of said tissue; and,

each of said electrical properties is compared with corresponding electrical
properties of known tissue types to determine said type of unknown tissue

wherein said electrodes are configured with an outer pair and an inner pair, said
outer pair being larger than said inner pair so that a homogeneity of an electrical field
seen by said inner pair is thereby improved.
